



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: AKAMATSU, et al

Serial No.: 09/392,722

Filed: September 9, 1999

Group Art Unit: 2827

Examiner: D. E. GRAYBILE

P.T.O. Confirmation No.: 1679

FOR: INTEGRATED ELECTRONIC DEVICE HAVING FLIP-CHIP CONNECTION
WITH CIRCUIT BOARD AND FABRICATION METHOD THEREOF

SUPPLEMENTAL AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

July 12, 2002

Sir:

In further response to the Amendment filed on May 22, 2002, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend claim 39 as follows:

39. (Three Times Amended) A method for fabricating an integrated electronic device having an electric connection connecting a first electrode of a first substrate with a second electrode of a second substrate, the method comprising the steps of:

forming first and second soldering metal bumps on the surfaces of the first and second electrodes, respectively, wherein a melting temperature of the first soldering metal bump is higher than a melting temperature of the second soldering metal bump;

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aligning the first and second soldering metal bumps to each other, and then keeping both in contact with each other; and

Cont'd
E1 heating the first and second soldering metal bumps to melt the second soldering metal bump at a temperature lower than the melting temperature of the first soldering metal bump without melting the first soldering metal bump and then cooling down to solidify the second soldering metal to form an electric connection between the first and second electrodes, wherein the first surface of the first electrode is not contacted with molten soldering metal throughout an entire manufacturing process of the integrated electronic device.

[Please add new claim 43 as follows:]

E2 43. (New) The method for fabricating an integrated electronic device according to claim 39, wherein the surfaces of the first and second electrodes have repellant and adhesive tendencies to molten metal, respectively.

REMARKS

Claims 39-43 are pending. Claim 39 is amended and new claim 43 is added. Support for the amendments to claim 39 can be found at page 8, lines 7-13.

A marked-up version showing the changes made by the present amendment is attached hereto as "Version with markings to show changes made."

As noted in the response filed on May 22, 2002, a Verification of the translation by Junji Sakurai would be filed shortly. The verification of translation is attached hereto.

An Information Disclosure Statement is also filed herewith. The Examiner is requested to acknowledge consideration of the references cited therein in the next communication received from the Office.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully Submitted,

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Attachments: Version with markings to show changes made
Verification of translation
Information Disclosure Statement